

Docket No. AUS9-2000-0592-US1

**CLAIMS:**

What is claimed is:

1. A method for retrieving client boot information in a  
5 network environment with multiple boot servers,  
comprising:

    sending an initial request for client configuration  
information to a first boot server;

- if the client configuration information is not found  
10 on the first boot server, sending a list request for a  
boot server list to the first boot server;

    receiving the boot server list; and

- sending a configuration information request for the  
client configuration information to each server in the  
15 boot server list until the client configuration  
information is found or a request has been sent to every  
server in the boot server list.

2. The method of claim 1, wherein at least one of the  
20 initial request, the list request, and the configuration  
information request is a trivial file transfer protocol  
request.

3. The method of claim 1, further comprising:  
25 receiving, from the first boot server, an error  
message that indicates that the client information is not  
found on the first boot server.

4. The method of claim 1, further comprising:  
30 receiving the client configuration information from  
an associated boot server in response to the client

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configuration information being found.

5. The method of claim 4, further comprising:

5 sending a boot file request for remaining boot files  
to the associated boot server based on the client  
configuration information.

6. The method of claim 1, further comprising:

10 determining whether the entries in the boot server  
list were pre-ordered, in order to better support load  
balancing among boot servers, prior to transmission to  
the client; and

15 if the list is found to be ordered, sending a  
configuration information request for the client  
configuration information to each server in the boot  
server list in the order given.

7. The method of claim 1, further comprising:

20 sending a configuration information request for the  
client configuration information to each server in the  
boot server list in order of increasing network distance,  
where distance is estimated from available network  
configuration information when there was no indication  
that the order of the original boot server list was  
25 optimized in order to better support load balancing.

8. The method of claim 1, wherein the method is  
performed by a network bootstrap program.

30 9. The method of claim 1, wherein the method is  
performed on a client computer.

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10. A method for providing client boot information in a network environment with multiple boot servers, comprising:

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        if the client configuration information is not
found, sending an error message that indicates that the
client information is not found;

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sending the boot server list to the client.

12. The method of claim 10, further comprising:

13. The method of claim 10, wherein the method is performed on a boot server.

14. An apparatus for retrieving client boot information in a network environment with multiple boot servers, comprising:

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30      first sending means for sending an initial request
      for client configuration information to a first boot

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server;
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5 server;
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third sending means for sending a configuration information request for the client configuration information to each server in the boot server list until the client configuration information is found or a request has been sent to every server in the boot server list.

20 16. The apparatus of claim 14, further comprising:

25 17. The apparatus of claim 14, further comprising:

means for sending a boot file request for remaining  
30 boot files to the associated boot server based on the  
client configuration information.

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18. The apparatus of claim 14, further comprising:  
means for determining whether the entries in the  
boot server list were pre-ordered, in order to better  
5 support load balancing among boot servers, prior to  
transmission to the client; and  
if the list is found to be ordered, means for  
sending a configuration information request for the  
client configuration information to each server in the  
10 boot server list in the order given.
19. The apparatus of claim 14, further comprising:  
means for sending a configuration information request for  
the client configuration information to each server in  
15 the boot server list in order of increasing network  
distance, where distance is estimated from available  
network configuration information when there was no  
indication that the order of the original boot server  
list was optimized in order to better support load  
20 balancing.
20. The apparatus of claim 14, wherein the apparatus is  
client computer running a network bootstrap program.
- 25 ~~21.~~ An apparatus for providing client boot information  
in a network environment with multiple boot servers,  
comprising:  
first receipt means for receiving an initial request  
for client configuration information from a client;  
30 first sending means for sending an error message  
that indicates that the client information is not found

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if the client configuration information is not found;  
second receipt means for receiving a list request  
for a boot server list from the client; and  
second sending means for sending the boot server  
5 list to the client.

22. The apparatus of claim 21, wherein at least one of  
the initial request and the list request is a trivial  
file transfer protocol request.

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23. The apparatus of claim 21, further comprising:  
means for adding an indication to the boot server  
list to inform the client that the list is given in  
optimal order to support load balancing among boot  
15 servers.

24. The apparatus of claim 21, wherein the apparatus is  
a boot server.

20 25. A computer program product, in a computer readable  
medium, for retrieving client boot information in a  
network environment with multiple boot servers,  
comprising:

instructions for sending an initial request for  
25 client configuration information to a first boot server;  
instructions for sending a list request for a boot  
server list to the first boot server if the client  
configuration information is not found on the first boot  
server;

30 instructions for receiving the boot server list; and  
instructions for sending a configuration information

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request for the client configuration information to each server in the boot server list until the client configuration information is found or a request has been sent to every server in the boot server list.

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~~26~~. A computer program product, in a computer readable medium, for providing client boot information in a network environment with multiple boot servers, comprising:

- 10 instructions for receiving an initial request for client configuration information from a client;  
instructions for sending an error message that indicates that the client information is not found if the client configuration information is not found;
- 15 instructions for receiving a list request for a boot server list from the client; and  
instructions for sending the boot server list to the client.

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